

SWEETWATER GOLD MINE  
Sierra National Forest  
Forest Service Road 5S24  
Jerseydale vicinity  
Mariposa County  
California

HAER CA-2281  
*HAER CA-2281*

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD  
PACIFIC WEST REGIONAL OFFICE  
National Park Service  
U.S. Department of the Interior  
1111 Jackson Street, Suite 700  
Oakland, CA 94607

# HISTORIC AMERICAN ENGINEERING RECORD

## SWEETWATER GOLD MINE

HAER No. CA-2281

**Location:** The Sweetwater Gold Mine is located on the east side of Forest Service Road 5S24, approximately 2.5 miles north of where 5S24 intersects with Mariposa County Road 118.

USGS 7.5 Quad: Feliciano Mountain  
UTM: Zone: 11; 245480mE / 4162730 Mn

**Dates of Construction:** Ca. 1873 (Ranch House), ca. 1915-1917 (Assay Shed), and ca. 1934-1939 (Ore Concentration Mill).

**Present Owner:** Sierra National Forest.

**Present Use:** Vacant.

**Significance:** The Sweetwater Gold Mine complex, which includes an ore concentration mill, assay shed, and related ranch house/boarding house, represents one of the best examples of a small gold mining site in California. Furthermore, the Sweetwater Gold Mine is associated principally with patterns of serial gold mining activities over many decades in Mariposa County—the southernmost of California’s Mother Lode counties. The Sweetwater Gold Mine long and persistent mining history covers the following historical mining themes: (1) late nineteenth and early twentieth century quartz lode mining, (2) Depression-era reoccupation of mines during the New Deal period to reprocess low-grade metals, and (3) mid to late twentieth century resurgent mining development following World War II. In all cases, the Sweetwater Gold Mine was a small individually owned, or non-corporate, mining operation that had, at best, modest success. A secondary, but related theme is the evolution of mining technology, and the use of appropriate technology in local non-corporate mining operations. The Sweetwater Gold Mine ore concentration mill holds architectural/engineering interest or merit because it illustrates the evolution of mining technology and the use of appropriate technology in local non-corporate mining operations (cyanidation vs. Chilean mill). The Sweetwater Gold Mine mill used machinery and tools that largely date to the 1930s, when Ray Foster purchased the mine. This processing facility is almost a living museum with tangible examples of small mine technology of that era, and how they could be uniquely adapted to local circumstances. By the time of its closing in 2007, the mine and its last operator (“Sweetwater Clyde” T. Foster) had become legendary among locals, who wished that he and the mine be recalled in history.

**Historian:** HAER historian Anthony Godfrey of U.S. West Research, Inc., Salt Lake City, Utah prepared this document, and acted as the project manager and editor for the project in behalf of the U.S. Forest Service, Sierra National Forest. Photographer

Clayton B. Fraser of Fraserdesign of Loveland, Colorado contributed the large-format photographs, as well as the site and floor plans for the project in behalf of the U.S. Forest Service, Sierra National Forest. The project was completed for the U.S. Forest Service, Sierra National Forest in April 2011.

**Project Information:** Between October 2000 and April 2001, the Forest Service, on behalf of the U.S. Government, acquired several structures through forfeiture of the mining claims of the Sweetwater Gold Mine on the Sierra National Forest California. At the time the Forest Service acquired the mine, eight buildings and structures associated with Sweetwater Gold Mine were extant. They were listed as: (1) an ore processing mill, (2) assay office, (3) compressor house, (4) woodshed, (5) barracks/storehouse, (6) main cabin, (7) chicken coop, and (8) outhouse. In addition to these buildings and structures, mining-related equipment located on the claims include two free-standing stamp mills (moved to the site in the early 1980s), burned remains of a small sawmill, a narrow-gauge trestle, a mercury retort or concentrate roaster, settling tanks and engines related to ore processing, and hundreds of feet of pipeline, miscellaneous tools, hardware, and equipment scattered about the mine site. Physical remnants of mining activities also included an old mill-tailing pond; six or more open adits, and several collapsed or partially collapsed adits and waste rock piles. Forest Service road 5S24 bisects the Sweetwater Gold Mine site.

In 2002, an archeological survey of the Sweetwater Gold Mine was conducted (FS 05-15-51-678-H), which determined that the property was potentially eligible for the National Register of Historic Places (NRHP). In 2008, Applied Earthworks, Inc. of Fresno, California determined that the Sweetwater Gold Mine was NRHP eligible under Criteria A, B, C and D. Thereafter, the Forest Service proposed reclamation for the Sweetwater Gold Mine that would have an adverse effect on the cultural resource. After consultation with the SHPO, the Forest Service entered into a Memorandum of Agreement (MOA) with the SHPO to mitigate any adverse effects to the property. This Historic American Engineering Record (HAER), produced in manufacturing/industrial site outline format, is one of the proposed mitigation measures.

## **Part I. Historical Information**

**Historical Context:** Placer mining on Sweetwater Creek began in 1858, when a “party of Italians” first prospected the area, but it is unknown whether any work occurred on or near the future Sweetwater Gold Mine site.<sup>1</sup> Thereafter, between 1858 and 1862, unknown prospectors reportedly located and recorded a 150-foot-long “auriferous Quartz Lode” on Sweetwater Creek. This discovery led to immediate speculation, and brought others to the area. On November 5, 1862, E. B. Rollins, W. Snooks, and J. H. Bondurant filed a 750-foot placer claim on Sweetwater Creek adjacent to the initial discovery. The

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<sup>1</sup> Wendy M. Nettles, Randy Baloian, Barry A. Price, and Mark Kile, National Register of Historic Places Eligibility Evaluation of the Sweetwater Gold Mine in Mariposa County, California (Prepared for U.S. Forest Service, Sierra National Forest by Applied Earthworks, Inc.), Fresno, California: 2008: p. 19.

streambed panned out quickly. Undiscouraged, and believing that quartz in the nearby hillside was the source of the placer gold, Rollins, Snooks, and Bondurant went from placer mining to investing in lode mining. By 1866, a variety of structures were present along Sweetwater Creek. They included an “old” water power Quartz Mill,” a “new” steam Quartz Mill,” a residence, sleeping houses and boarding houses, engines, boilers, a circular saw, and fixtures. By the size of the mining operation, Rollins, Snooks, and Bondurant made quite an investment. But, Rollins, Snooks, and Bondurant may have overestimated the areas gold output, because in 1866 they defaulted on a \$3,200 loan to Charles Bogan. A year later, Mariposa County sold the Sweetwater Mine at auction. Bogan & Company, the high bidder, purchased the property, mineral rights, and all equipment and supplies on the site for \$2,500. Then, in February 1870, Charles Bogan sold the operation to James and David Malone for the sum of \$3,000. Three years later, James Malone assumed full ownership of the property, but not the mineral claim, which was abandoned. Later descriptions of the property as a ranch suggest that from 1873 onward the Malone brothers may have focused on raising livestock instead of mining.<sup>2</sup> A mining venture could be abandoned at anytime if significant ore reserves could not be proven. Since most improvements in the 1860s mining era were of a temporary nature, the equipment was probably moved and used elsewhere. Additionally, the residence, sleeping houses and boarding houses were probably dismantled and moved as well.

The property’s story may have ended here, but it appears that the Malone ranching operation failed after almost ten years of operation. To get out of perhaps a bad economic situation, in 1882 James Malone filed a notice of relocation of a quartz claim for the “Sweet Water Quartz Mining Claim.” Having done so, he thereafter immediately sold the mineral rights to James Grove for \$200, as well as the Malone Ranch in the agreement. At this time, the Malone Ranch stood on a tract of fenced land (7-8 acres) that included a ranch house, which may have been constructed from materials from the earlier mining development, an orchard, garden, and other unnamed improvements and the water rights to a ditch lying on the left (west) side of Sweetwater Creek.<sup>3</sup>

James Grove bought the property, which included the ranch house, with the intent of pursuing lode mining instead of cattle ranching. Grove opened up a new mine adjacent to his newly acquired property and called it the “Golden Age” Mine. In 1884, a correspondent for the *Mining and Scientific Press* visited the Sweetwater district and took note of the “Golden Age” mine. By this date, Groves had worked the Golden Age Mine to a depth of 130’ along an 18” vein. He also had a 10 stamp steam-powered mill available near the mine to process the ore. The steam-powered mill also processed ore from several nearby mines as well.<sup>4</sup>

It appears that the Golden Age Mine was either not profitable or unproductive. In any case, in 1888, James Grove sold his quartz mine claim and all of his property to John Grove (relationship to James Grove uncertain) at a small profit of \$385. The transaction

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<sup>2</sup> Ibid., pp. 19-20.

<sup>3</sup> Ibid., p. 20.

<sup>4</sup> Ibid., pp. 20-21.

included—water rights, dwellings, fencing, and an agricultural field. Thereafter, James Grove pursued placer mining along Sweetwater Creek, but still probably resided in the ranch house. In 1889, John Grove filed a notice of location for the Grove Placer Claim—a 20-square-acre area southeast of the Sweetwater mineral rights. However, it is not known whether or not John Grove mined either the Sweetwater Mine Claim, or the Grove Placer Claim, with any success because no archival documents could be found to identify the occupants, claimants, or any productive numbers for either claim between 1889 and 1897.<sup>5</sup>

This is not surprising. Like other operations in Mariposa County, by 1890, the Golden Age Mine was probably idle or in decline, and reportedly by this date, at least one of the boarding houses on the property had burned to the ground—an indication that the property was deteriorating. Furthermore, in 1890, gold production in California had dropped to its lowest level ever (595,486 ounces) with the exception of during the height of the Great Depression (1930).<sup>6</sup> Then came the Panic of 1893. The ill effects of the depression that followed devastated the nation's mining industry so greatly that in general it never really recovered until circa 1900.

Meanwhile, in 1897, J.W. Snyder acquired the Golden Age Mine. J.W. Snyder, as a speculator, may have seen an investment opportunity in acquiring the Golden Age Mine, because soon after acquiring the property, he granted the mine to S.J. Gage and two investor/partners (C.C. Wallace and a Mr. Smith).<sup>7</sup> At this time, Mariposa County was just starting to experience an increase in gold production, largely because the cyanidation process for treating gold had been introduced into the area. Developed in Scotland in 1887, and first used on a production scale in New Zealand in 1889, the cyanidation process came to dominate United States milling operations by 1900 for both gold and silver ores. The process was simple and cheap. Any gold-bearing ore, including waste rock from previous mining operations, could be run through a diluted solution of sodium-cyanide and, after a few other relatively simple steps, it would yield a sponge of gold that only needed a last refining to bring it to a nearly pure state. Using this new technology, low-grade ore deposits could be worked profitably. Soon thereafter most of the old mine dumps in the nation were being treated at the site with cyanide vats.<sup>8</sup>

Interestingly, after acquiring the Golden Age Mine, Gage and his partners did not turn to the cyanidation process, which was transforming the mining landscape elsewhere. This may have been because the gold was found in association with oxides and sulfides of copper. Gold in copper minerals, such as chalcopyrite and enargite, cannot be processed by cyanidation because the copper consumes the cyanide. Instead, they proceeded to

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<sup>5</sup> Ibid.

<sup>6</sup> California Department of Transportation (CALTRANS), A Historical Context and Archaeological Research Design for Mining Properties in California, Sacramento, California: 2008, p. 58.

<sup>7</sup> Nettles, et.al., NRHP Evaluation of the Sweetwater Gold Mine in Mariposa County, California, pp. 20-21.

<sup>8</sup> Anthony Godfrey, Historic Preservation Plan for Placer and Hard Rock Mining Resources in Montana (Prepared for the Bureau of Land Management, Montana, Purchase Order ESP000053), Volume 1, U.S. West Research, Inc., Salt Lake City, Utah: 2003, pp. 73-74.

invest capital into the mine itself, and they developed several quartz stamp mills in the area for reprocessing low-grade ores. For instance, there was a Groves Quartz Mill and a Ferguson Quartz Mill that fell outside of the Sweetwater claims.<sup>9</sup>

To work the mine, S.J. Gage and his partners built a mining superintendent's residence (later used as a barracks/storehouse by Clyde Foster and demolished in 2002 for safety reasons) that logically overlooked the entire site (see Site Plan), and most likely enlarged the residence on the property to accommodate a workforce for the reopened Golden Age Mine—the current standing ranch house. For a few years thereafter, the Golden Age Mine produced an estimated 2 ounces of gold per ton of ore,<sup>10</sup> which made it profitable. This production was reflective of steadily increasing gold production in California that rose from 741,798 ounces in 1895 to 760,390 ounces by 1900.<sup>11</sup> In 1903, the Golden Age Mine was temporarily shut down, and then sold to a series of mine operators, who tried to take advantage of price increases in precious metals. This particular time was also the first time that capital intensive development took place in many mining areas of Mariposa County.<sup>12</sup>

In 1904, S.J. Gage sold the Golden Age Mine to Lewis E. Hanchett, a San Jose native, who gained his wealth from inherited mining interests in Esmerelda County, Nevada. Hanchett later diversified his interests by investing in “streetcar suburbs” outside of San Jose, and in industrial projects in Southern California. Upon purchase, Hanchett created the Sweetwater Mining Company, and owned the newly named “Sweetwater Gold Mine” property from 1904 until 1910. It is not clear whether the Sweetwater Mine Company shipped and built a new 10-stamp mill, or simply refurbished an already existing 10-stamp mill that had been on the property since perhaps 1884. Contemporary accounts however note that several other operations in Mariposa County were reopening with new equipment. Nevertheless, the Company did purchase a new straight-line compressor, presumably to power air drills to work the mine's 1,600 foot tunnel.<sup>13</sup>

By May 1905, the Sweetwater Gold Mine resumed operation. However, there are no production statistics for the mine, but the mine probably proved unprofitable to Hanchett because in 1910 the Sweetwater Gold Mine was put up in a “sheriff's sale.” In that year, Mary Revel received it as payment for a bad debt. She then transferred it to George S. Revel (relationship to Mary Revel uncertain), and the next year, George Revel sold the mine to S. Haught.<sup>14</sup>

Meanwhile, in August 1914, the European portion of World War I began. But unlike strategic minerals (zinc, lead, etc.), where the federal government stepped into the mining

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<sup>9</sup> Nettles, et. al., NRHP Evaluation of the Sweetwater Gold Mine in Mariposa County, California, p. 21.

<sup>10</sup> Ibid.

<sup>11</sup> CALTRANS, A Historical Context and Archaeological Research Design for Mining Properties in California, p. 58.

<sup>12</sup> Nettles, et.al., NRHP Evaluation of the Sweetwater Gold Mine in Mariposa County, California, p. 21.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

industry to efficiently expand, control, and coordinate the production and stockpiling of these critical metals used in war, gold was considered a non-essential war mineral. Therefore, it is not surprising that Mariposa County's gold mines, including the Sweetwater Mine, appear to have contributed little to the national output and/or were inactive altogether. Interestingly, during this period, the Sweetwater Gold Mine changed hands twice. First, in 1914, the Midway Mining and Milling Company assumed ownership of seven Sweetwater claims from Haught. A year later, a contemporary account gave a fairly detailed description of the Sweetwater Mine and the equipment on hand. The account noted that the Sweetwater Gold Mine had the following typical mining equipment: 2,300 feet of track, 2 iron skips, a Cameron steam pump,<sup>15</sup> a Blake rock crusher,<sup>16</sup> 2 amalgamation plates (4' x 16'), 2 Johnson vanners, 1 Standard table, 1 Pindar table,<sup>17</sup> 1 compressor, 2 boilers, 4 machine drills, and a 10-stamp mill. However, the use of Cameron pump indicates that the mine operators were probably experiencing water problems in the mine. The account also noted the following buildings on the site: a boarding house, blacksmith shop, concentrates house, and a bunkhouse. Sometime after 1915, an "assay office" was noted on the property as well. Then, in 1917 the mine was sold to E. C. Gamble and W. S. Stewart of Oakland, who "prospected but undertook no sustained mining."<sup>18</sup>

However, a catastrophic event at the mine may have happened at this time that destroyed the 10-stamp mill operation because the documents thereafter make no mention of the 10-stamp mill being operational. Today, the remnants of the stamp mill are scattered on the site (see Site Plan for the location of the Ten Stamp Mill Ruins). They include a straight-line compressor and related equipment with physical evidence of metal failure, a pushed over and collapsed stamp mill with ore feeders, a boiler smokestack nearby, and a locomotive boiler<sup>19</sup> that perhaps rolled down to the base of the hillside after an explosion of unknown causes.

At the end of World War I, Mariposa County's gold mines fell into a slump. By October 1919, only 4 of the county's 200 mines were in production, and the Sweetwater Gold Mine was not one of them. The decade of the 1920s to 1933 can be characterized as an

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<sup>15</sup> The first reciprocating steam pump was invented by A.S. Cameron in 1860 and by the 1890s was advertised and used widely throughout the West. Noted for its simplicity, in 1909, the Ingersoll Rand Company acquired the A.S. Cameron Steam Pump Works.

<sup>16</sup> Invented in 1857 by Eli Whitney Blake, the nephew of famed inventor Eli Whitney, the Blake Jaw Crusher employed a deceptively simple toggle linkage construction to break up stone and soon became the preferred machine for industrial rock crushing.

<sup>17</sup> A Pindar table is a revolving table on which are tapering spiral copper cleats on a linoleum cover. The tailings are washed over the riffles and off the edge, while the concentrates are delivered at the end of the riffles.

<sup>18</sup> Nettles, et.al., NRHP Evaluation of the Sweetwater Gold Mine in Mariposa County, California, p. 22.

<sup>19</sup> Locomotive boilers were so named because railroad engine manufacturers favored it. They usually consisted of a horizontal shell with a firebox built into one end, and a smokestack projecting out the other end. Nearly all models used in the West stood on wood skids and were easily portable. Locomotive boilers were usually ten to sixteen feet in length and three feet in diameter. They were popular from the 1870s to the 1920s and came in all sizes. Recently, the boiler was removed illegally from the Sweetwater Gold Mine.

interregnum period in California's mining history. It was a time of stagnation, decline, and possible cessation for many of types of mines as metal mining fell sharply in employment and influence in the state. Ironically, this was time when most of the nation enjoyed the prosperity of the roaring twenties. But, by the end of the 1920s, most everyone in the United States came under the economic grip of the Great Depression. Mine owners, and miners alike, enjoyed little relief during this period.

During the 1920s and early 1930s, the Sweetwater Gold Mine was leased or changed hands several times. For instance, in 1919, the Gamble family leased the Sweetwater Gold Mine to the Coalinga-based Dominican Mining Syndicate, which reopened it. When a mining group leases a mine, they pass a percentage of the gross receipts on to the owners rather than working on a contract basis or for hourly wages. The lessees assume greater risks, but expected greater dividends without a heavy initial outlay for machinery or expensive development work. On the other hand, leasing a mine was a safe investment for the owners because they did not have to pay expenses; less ore was lost through stealing or carelessness. Leasing was also common in declining mining districts, such as in Sweetwater Mining District. However, the leasing arrangement with the Dominican Mining Syndicate proved unproductive, and in 1922, Lewis E. Hanchett reacquired the Sweetwater Gold Mine. Sometime afterward, he sold the mineral rights to C.A. McCartney, who in 1928 leased them out during the early years of the Depression.<sup>20</sup>

With the rise of the New Deal Era, the Roosevelt Administration poured a great deal of money into California, some of it that directly and indirectly helped to revive gold and silver mining operations in the state. The key New Deal actions that helped reinvigorate California's mining industry occurred when President Roosevelt and Congress passed of the Gold Reserve Act of 1934. It required that all gold and gold certificates held by the Federal Reserve be surrendered to the United States Department of the Treasury, and raised the official price of gold from \$20.37 to \$35 per ounce. Gold at \$35 an ounce enabled miners working lower grade ore to begin operations again at a profit, and caused a new mining boom that enthused many unemployed miners to return to previously mined regions. A period of small-scale operations began nationwide as individual miners staked out new claims, reworked old claims, rejuvenated and updated former mining milling operations, and/or even began a few new ones.

Ray G. Foster was one of these individuals. In the late 1920s, Ray Foster obtained first-hand gold mining experience, while working the Twin Sisters Mine in Nevada County to the north, and in 1933, took advantage of the opportunity to mine the Sweetwater Gold Mine, when Nettie McCartney sold the property to him. During the New Deal years, Ray Foster operated the mine through the San Rafael-based Hudson River Gold Mining Company, Ltd., but only with marginal success. For instance, between 1934 and 1937, approximately 300 tons of ore was milled at the Sweetwater Mine, which yielded only 70 ounces of gold and 6 ounces of silver—or just under \$2,500.<sup>21</sup>

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<sup>20</sup> Nettles, et.al., NRHP Evaluation of the Sweetwater Gold Mine in Mariposa County, California, pp. 22-23.

<sup>21</sup> Ibid.



Nonetheless, the New Deal Era boom largely ended shortly after the outbreak of World War II in December 1941. Though World War II revived mining throughout the American West as the growing war industries demanded increasing amounts of raw materials and strategic metals, the gold and silver mine segment of the mining industry did not enjoy this boom. Soon after Pearl Harbor, the War Productions Board (WPB) issued government Order L-208, which closed all non-essential mining in support of the war effort.<sup>22</sup> Despite L-208, during the first two years of World War II, Ray Foster leased the mine out to Lee Rowland, who took out another 32 ounces of gold from 9 tons of handpicked ore.<sup>23</sup>

At the conclusion of World War II and the federal government lifted Order L-208, a few gold mining operations reopened in Mariposa County. Those that did only operated sporadically, and the Sweetwater Mine may have been one of them. But change came after the Korean War. In 1952, following service in the Korean War, Ray Foster's son Clyde Thurston Foster, commonly known as "Sweetwater Clyde," began to earnestly mine the Sweetwater Mine claims and did so off and on until his retirement in 1993. Californian born, "Sweetwater Clyde" Foster grew up mining with his father in Nevada County. During the Depression, Clyde attended California's Santa Rosa Junior College, and then the University of Nevada's Mackay School of Mines (1930 to 1931). Following his university education and up until World War II, Clyde Foster owned and worked the Sleeping Beauty Mine in Nevada County, several counties north of Mariposa County. With the outbreak of World War II, Foster served in the U.S. Army and U.S. Army Corps of Engineers, where he received survey training at the Stanford University Graduate School.<sup>24</sup>

From 1952, until both his parents passed away in the 1970s, Clyde Foster leased the mine from their corporation (Hudson River Gold Company) for \$1 per year. He then assumed full ownership of the property. During that time, Clyde Foster began work on an old inclined mine shaft, which eventually became the main adit for the Sweetwater Gold Mine. This action may have created a linear area of subsidence south of the assay shed. When the main adit collapsed, it separated the assay shed from the ten stamp mill to the south (see Site Plan). During this time, Clyde Foster also located several new mineral rights and reportedly worked as many as 14 claims at one time. In leaner years, he worked as a surveyor. Foster estimated that in the 1950s he took out 4 ounces of gold per ton, and remarked that the mine needed to extract at least one-half ounce per ton to stay in business. In its best years, the Sweetwater claims generally produced a steady, typically unspectacular stream of gold as opposed to the high-grade mines with scattered but rich pockets of ore.<sup>25</sup>

About 1976, he decided to reopen the old inclined shaft worked by previous operators

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<sup>22</sup> Godfrey, Historic Preservation Plan for Placer and Hard Rock Mining Resources in Montana, pp. 73-74.

<sup>23</sup> Nettles, et.al., NRHP Evaluation of the Sweetwater Gold Mine in Mariposa County, California, p. 23.

<sup>24</sup> Ibid.

<sup>25</sup> Ibid., pp. 23-24.

(considered the main adit to the Sweetwater Mine site), and needed a continual supply of cut wood to shore the tunnel walls. Therefore, Foster built a sawmill and took on “partners”—younger men who provided hard labor in exchange for a share of the profit. In the 1980s, at the suggestion of the Forest Service, a one-stamp mill owned by Robert Anthony and a five-stamp mill owned by Julian Neal were moved to the site so that tailings from all three mills could be concentrated in one location. However, there is no evidence indicating whether he was successful in this endeavor. In 1993, “Sweetwater Clyde” retired to Yountville in Napa County. Two successive sets of owners attempted to rejuvenate the old incline shaft but were unable to return it to productivity, or slow its steady decline. By the early 2000s, looters and decay began to take their toll on the property. Because of local historical interest, citizens called for the preservation of the Sweetwater Gold Mine’s buildings and structures, and the ranch house was referred to as the “main cabin.”<sup>26</sup>

## **Part II. Sources of Information**

**A. Primary and Secondary Sources:** The essential knowledge for this section of this HAER study comes from two reports, which thoroughly explored available primary and secondary resources pertinent to the subject matter, including California mining journals, records at the Mariposa County Courthouse, and the California State Mining and Mineral Museum in Mariposa, California, and personal interviews, and video-taped interviews with Bud Munck. They are:

Mogge, Marie and Connie Popelish. “Archeological Site Record for the Sweetwater Mine.” On file, Sierra National Forest, Clovis, California: 2003.

Nettles, Wendy M., Randy Baloian, Barry A. Price, and Mark Kile. National Register of Historic Places Eligibility Evaluation of the Sweetwater Gold Mine in Mariposa County, California. Prepared U.S. Forest Service, Sierra National Forest. Applied Earthworks, Inc., Fresno, California: 2008.

**B. Secondary Sources:** Secondary sources consulted for this report include the following:

California Department of Transportation (CALTRANS). A Historical Context and Archaeological Research Design for Mining Properties in California. Sacramento, California: 2008.

Godfrey, Anthony. Historic Preservation Plan Placer and Hard Rock Mining Resources in Montana. 3 Volumes. Prepared for Bureau of Land Management, Montana, Purchase Order ESP000053. U.S. West Research, Inc., Salt Lake City, Utah: 2003.

Godfrey, Anthony. Historic Preservation Plan: Historic Resources on the White River

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<sup>26</sup> Ibid., p. 24.

National Forest. 3 Volumes. Prepared for U.S. Forest Service, White River National Forest, Contract #AG-82D7-P-07-0052. U.S. West Research, Inc., Salt Lake City, Utah: 2009.

Meyerriecks, Will. Drills and Mills: Precious Metal Mining and Milling Methods of the Frontier West. Tampa, Florida: W. Meyerriecks: 2001.

Twitty, Eric. Riches to Rust: A Guide to Mining in the Old West. Montrose, Colorado; Western Reflections Publishing Company.

**C. Likely Sources Not Yet Investigated:** In 2003, and again 2008, archeologists extensively inventoried and collected hundreds upon hundreds of industrial and domestic artifacts from dumps and scattered areas that have gone unanalyzed. Forest Service archeologists have also inventoried and collected artifacts from the site as well. The collected artifacts are currently stored at the Jerseydale Fire Station, Sierra National Forest. The artifacts are in fair to poor condition because they have been affected through exposure to the elements, vandalism, and re-use. Taken in conjunction with an analysis of this material associated with the Sweetwater Gold Mine and video-taped interviews with Bud Munck, historical archeology might be conducted here with exceeding profitability.

Additionally, the Mariposa Museum and History Center remains an untapped archival resource, and is more than likely to have some information regarding the mine.

